

REMARKS

Claims 1-6, 8-9, 11-15, 17-21, 23-35, 37, 42-46, and 48-56 are currently pending in the application. Of these claims, claims 1, 12, 18, 23, 32, 35, 42, and 51 are independent.

Consideration of Prior IDS's

Applicant previously mailed Information Disclosure Statements on December 7, 2001 and August 4, 2005. Applicant, however, has not yet received an initialed copy of the PTO/SB/08 forms indicating the documents listed on those forms have been considered. Applicant respectfully requests consideration of such documents and the return of an initialed copy of the PTO/SB/08 forms.

Request for Listing of Garney

In the Office Action, U.S. Patent Application Publication No. 2002/0199152 A1 to Garney et al. ("Garney") is relied upon in the rejection of claim 29. Garney, however, is not listed on the Notice of References Cited (PTO-892) form attached as part of the Office Action. Applicant respectfully requests that Garney be listed on such a form and attached as part of the next Office Action.

Shenk Rejections

Claims 12, 18, 23, 25, 31, 35, and 37 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,513,392 to Shenk ("Shenk").

Applicant respectfully traverses these rejections as follows.

Independent claims 12 and 18 recite update of a usage bit for data read from a memory during a writeback cycle to write the read data back to the memory.

Independent claims 23 and 35 recite update of usage information for data read from a memory during a writeback cycle to write the read data back to the memory.

The Office Action on page 3 at lines 1-3 alleges that Shenk discloses updating a count while data is being recirculated or written back to a shift register.

Applicant respectfully submits, however, that Shenk did not teach any count that can be equated with usage information for data recirculated through shift register 243 (Figs. 2 and 5). Rather, Shenk taught use of a sector length count in programmable counter 572 (Fig. 5) to identify when data recirculated through shift register 243 is no longer to be written to disk. See, e.g., Shenk in column 18 at lines 5-13, column 11 at lines 1-14, and claim 1 in column 20. Applicant respectfully submits this sector length count cannot be equated with usage information for data recirculated through shift register 243 because the sector length count is also updated when initial data is written to disk prior to writing any recirculated data to disk.

Noting the remaining rejected claims depend from independent claim 23 or 35, Applicant therefore respectfully submits these rejections have been overcome and should accordingly be withdrawn.

Note that there may be additional reasons for the patentability of claims. For example, there may be additional reasons why the dependent claims are patentable.

Mizuno Rejections

Claims 23, 25, 31, 35, and 37 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,285,626 B2 to Mizuno et al. ("Mizuno").

Applicant respectfully traverses these rejections as follows.

Independent claims 23 and 35 recite update of usage information for data read from a memory during a writeback cycle to write the read data back to the memory.

The Office Action on page 4 at lines 1-4 equates such claimed usage information with a valid bit 111 in Figure 1 of Mizuno.

Applicant respectfully submits, however, that valid bit 111 cannot be equated with the claimed usage information for data read from a memory. Applicant respectfully submits that, when new data is to be stored in a cache entry that has its valid bit 111 set, the existing data 113 in that cache entry is written back to dynamic memory 100 and the new data read out from dynamic memory 100 is stored in that same cache entry. Applicant respectfully submits that the same valid bit 111 would then be set for the cache entry which now has the new data 113 because the cache entry would remain valid albeit with different data 113. Because the valid bit

111 is no longer associated with data 113 in its corresponding cache entry when that data 113 is written back to dynamic memory 100, Applicant therefore respectfully submits that Mizuno did not teach the claimed update of usage information for data read from a memory.

Noting the remaining rejected claims depend from independent claim 23 or 35, Applicant therefore respectfully submits these rejections have been overcome and should accordingly be withdrawn.

Note that there may be additional reasons for the patentability of claims. For example, there may be additional reasons why the dependent claims are patentable.

Garney Rejection

Claim 29 is rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application Publication No. 2002/0199152 A1 to Garney et al. ("Garney").

Applicant respectfully traverses this rejection as follows.

Claim 29 depends from independent claim 23 which recites update of usage information for data read from a memory during a writeback cycle to write the read data back to the memory.

The Office Action on page 4 at lines 10-15 appears to equate such claimed usage information with an error correction code (ECC) in Garney, refers to Figure 4 and blocks 402 and 406 of Garney, and states "when a correctable error occurs in the in the ECC data but not in the protected data, ECC data is corrected, i.e. updated, and written back".

Applicant respectfully requests clarification of this rejection because Applicant is unable to identify any occurrence of correctable error in ECC data, any protected data, or any correction of ECC data in Garney. Specifically, does ECC data refer to an ECC itself or to data read from and written back to memory storage device 306 (Fig. 3)? What is considered to be protected data in Garney? Applicant notes that neither the word protected nor variants of the word protect appear in Garney.

Regardless, Applicant respectfully submits that Garney did not teach any updating of an ECC for data read from and written back to memory storage device 306.

Applicant therefore respectfully submits this rejection has been overcome and should accordingly be withdrawn.

Note that there may be additional reasons for the patentability of claims 23 and/or 29.

New Claims

New claims 49 and 50 depend from independent claims 12 and 42, respectively.

Applicant therefore respectfully submits new claims 49-50 are patentable.

New independent claim 51 recites usage information for data read from memory is to be updated during a writeback cycle to write the read data back to the memory. Applicant respectfully submits none of Shenk, Mizuno, or Garney taught such feature(s). Noting claims 52-56 depend from claim 51, Applicant therefore respectfully submits new claims 51-56 are patentable.

Note that there may be additional reasons for the patentability of these new claims. For example, there may be additional reasons why the dependent claims are patentable.

It is respectfully submitted this patent application is in condition for allowance, for which early action is earnestly solicited.

The Examiner is invited to telephone the undersigned to help expedite the prosecution of this patent application.

Respectfully submitted,

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